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ABSTRACT

This report studied the alternative method of using book duplicates as replacement copies for worn or missing stack items. The simple operational procedure which is proposed and evaluated could be adapted to virtually any library setting. When tested in Brigham Young University's Lee Library, it was found that such a procedure cost an estimated $110 and saved over $4,000 for the replacement of 1,000 books. (Author/AWP)

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THE DUPLICATE-REPLACEMENT SYSTEM: AN ALTERNATIVE METHOD OF HANDLING BOOK DUPLICATES

by

Russell T. Clement

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

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ABSTRACT

Depending upon the way they are handled, book duplicates (books with the same imprint information and which are otherwise identical) can be either an asset or a liability in a library. Since there are several ways of handling book duplicates, the problem actually lies in deciding which method is the most effective and beneficial for which duplicates.

This paper studied the alternative method of using book duplicates as replacement copies for worn or missing stack items. It proposed and evaluated a simple operational procedure which could be adapted to virtually any library setting. When tested in Brigham Young University's Lee Library, it was found that such a procedure, for one thousand duplicates, cost an estimated $110 and saved over $4,000. Hopefully, the end-result of this study will be an uncomplicated guideline for using duplicate books as replacement copies in any library.

PREFACE

For the past two years I have worked as a student employee for the Pre-Cataloging Section of the Acquisitions Department of Brigham Young University's Harold B. Lee Library. This has been a period of rapid expansion and change. The new facilities for the library have created several opportunities to re-evaluate existing work procedures and test possible alternatives.

One procedure which was re-evaluated in the Pre-Cataloging Section involved the various means of handling book duplicates. Last year, under the supervision of the Section, I became involved with formulating, refining, and testing the previously unused alternative of replacing deteriorated or missing stack copies with better quality duplicates. The following study and system resulted.

I wish to thank Rick Grunder and others of the Pre-Cataloging Section for their advice and help with this project. Also, I have greatly appreciated the suggestions and patience of Professors Victor Purdy and H. Thayne Johnson.

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Chapter 1

THE PROBLEM

Introduction

Often in librarianship decisions on the "best" way to operate and use library materials are made on sentiments, notions, and long established practice. If it is assumed that a process or procedure has worked reasonably well in the past, all too often that procedure lingers on until pressures or inadequacies become blatant.

Problem solving, of course, should be based upon an analysis of current procedures and an evaluation of possible alternatives. Once the most feasible option has been determined, implementation and refinement of that option begins. This paper is a description and evaluation of an operational procedure devloped to test one posible solution to the problem of book duplication.

Every library, regardless of size, must come to grips with the problem of book duplication. Large libraries receive large numbers of books and other library materials from numerous sources. Even smaller libraries receive some gifts. Some of these materials are vital to collection development; others are not.

According to Alfred H. Lane, one large library could use only about 40 percent of the materials it received as gifts.[1] The other 60 percent or more (many of which would probably be duplicates) pose the problem--what can be done with them?

Through time and tradition, several common ways of handling book duplicates have evolved. For unneeded and unwanted book duplicates, five common methods exist: 1) exchange duplicates with other libraries, 2) sell to patrons, 3) sell to book dealers, 4) donate to other libraries, institutions, and patrons, and 5) destroy by pulping or other means.

For those duplicate books which can be used in the collection, two basic alternatives exist. A duplicate can either be used as a second or third copy or it can be used to replace a worn or missing stack copy.

It is often difficult to decide when a duplicate book is needed in the collection. With the advent of automated circulation systems, however, heavily used books can be easily identified and multiple copies added. Without these data, librarians make at best an educated guess as to the need of an individual duplicate in the collection. If a duplicate is used to replace a worn stack copy, a stack check is required. This stack

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[1]Albert H. Lane, "Gifts and Exchanges: Practicalities and Problems," Library Resources & Technical Services, 14 (Winter, 1970), 92.

check involves comparing the stack copy with the duplicate copy.

It was assumed that some libraries compared and used certain book duplicates to replace worn or missing copies, at least on a haphazard basis. However, if this was a correct assumption, the researcher found nothing written on the practice. A literature search for discussions on the method of using duplicate books to replace worn or missing copies yielded no sources.

Statement of the Problem

An operational procedure was proposed, developed, and evaluated for the method of using certain book duplicates as replacement copies. This relatively simple procedure was named the duplicate-replacement system. Hypothetically, it would enable any library to systematically upgrade the quality of its collection and save money.

The main problem was to develop, test, and evaluate a general operational procedure which would allow a library to determine at a given time whether or not replacing worn or missing stack copies with duplicates was economical and beneficial in terms of improving collection quality.

Delimitations

This paper dealt specifically with the description, development, and evaluation of the duplicate-replacement

system as implemented at the Harold B. Lee Library of Brigham Young University. Related problems such as formulas to determine when to add a duplicate book as a second copy (based upon automated circulation statistics), the dynamics of book wear, and serial duplication were not discussed.

Chapter 2

METHODOLOGY

Background

To help understand the environment of this study, certain background information was gathered regarding the Lee Library at Brigham Young University. The Lee Library has experienced phenomenal growth in the past twenty years. In 1956, the library had 225,000 books. By 1967, this figure had increased to over 600,000 volumes. In 1971, the Lee Library acquired its millionth volume.[2] Currently, in 1977, the library has approximately 1,300,000 volumes.

Like many other large research libraries, the Lee Library acquires large numbers of books in collections and as gifts. From September 1, 1975 to August 31, 1976, the Gifts Section of the Acquisitions Department alone received 10,616 books. Of this number, only 2,700 or about 25.4 percent were added to the collection.[3]

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[2]Hattie M. Knight, Brigham Young University Library Centennial History, 1875-1975 (Provo: Lee Library, 1976), p. 113.

[3]Harold B. Lee Library, Acquisitions Department Annual Report, 1976 (Provo: Lee Library, 1976), p. 51.

All recently acquired library materials, except serial publications, are routed to the Pre-Cataloging Section for preliminary bibliographic searching. Duplicate books and close different editions (different editions of a book which have no major textual differences) are detected in the Pre-Cataloging Section and separated from other library materials. A book reviewer, usually a subject specialist, then selects book duplicates to add to the collection. Since the Lee Library does not have an automated circulation system which could indicate heavily used books, a subjective decision is made on when to add a duplicate book as a second copy.

Before this study, book duplicates were not compared to matching stack copies. Most of the duplicate books which were not added to the collection were disposed of by conventional methods: by exchanging, by selling, by giving them away, or by pulping. The usual procedure was to box and store them, awaiting patron sales. Eventually, storage problems and a re-evaluation of work procedures created a need to propose and evaluate other alternatives.

The Duplicate-Replacement System

One alternative method of handling book duplicates which was evaluated was the duplicate-replacement system. In order to test the system, one thousand good quality

book duplicates (previously rejected by subject librarians) and close different editions were selected. The total time spent selecting these duplicates was negligible. The vast majority of these books were duplicates originally received as gifts. These one thousand duplicate books were then compared to stack copies according to the system. Statistics were kept which included: 1) the number of duplicates which were judged to be in about the same condition as stack copies and were not added, 2) the number of duplicates which were considered to be in better condition and warrented exchange with worn stack copies, and 3) the number of stack copies missing from the shelves.

Stack copies missing from the shelves were then checked with the main circulation file to determine if they had been circulated. In most cases, they had not and a duplicate copy was used to replace them. If a given book was checked out at the time of comparison, usually the duplicate copy was added anyway since it was assumed that the book was heavily used.

The judgment of whether a stack copy was worn enough for replacement was admittedly subjective. Some criteria that were used to help decide included: broken backs, loose and worn covers, heavily marked or missing pages, and a general worn appearance. If a stack

copy was worn sufficiently to be judged defective in any of these areas, it was pulled from the shelf and withdrawn. The better quality duplicate was then used to replace it.

To facilitate the duplicate-replacement system, book duplicates were arranged on shelves according to the different floors in the library. The usual procedure was to evaluate twenty to thirty duplicate books at one time whose stack copies could be found on the same floor. After one thousand duplicate books had been checked against stack copies, statistics were totalled and the system was evaluated.

Evaluation of the System

In order to determine the utility and feasibility of the duplicate-replacement system tested at the Lee Library, three indicative factors were computed. The first was the efficacy of the system per one thousand duplicates. The second was the average cost of the system per one thousand books. The third was the estimated cost savings of the system over selling the same duplicates at a patron sale.

Three statistics were needed in order to determine the efficacy of the system per one thousand book duplicates. These statistics were: 1) the number judged to be in the same condition, 2) the number judged to be

in better condition, and 3) the number of missing copies. Since the number of duplicates in better condition and the number of missing copies represented the total which needed replacement, these two figures were added together.

In order to calculate the average cost of the system per one thousand duplicates, two statistics were needed: 1) the average cost of comparing and evaluating one thousand duplicates, and 2) the average cost of processing the duplicate books which were used to replace worn or missing copies. The average cost of the system per one thousand books was gathered by adding these two figures together.

In order to compare the amount of money saved by replacing a worn or missing volume with a better quality duplicate over selling that same duplicate at a patron sale, two factors were considered: 1) the estimated average price of purchasing a replacement copy for a worn or missing book, and 2) the estimated average price earned per book at a patron sale. After these two averages were calculated, the cost savings of the system could be analyzed.

Although these statistics were computed using data gathered at the Lee Library, the same formulas could theoretically be adapted to any library. Generalization of this model and operational procedure is discussed in Chapter 4.

Chapter 3

STATISTICS OF THE DUPLICATE-REPLACEMENT SYSTEM

After one thousand duplicate books had been compared to matching stack copies, the following statistics were computed: 1) the efficacy of the system, 2) the average cost of the system per one thousand duplicates, and 3) the estimated cost savings of the system over selling the same duplicate books at a patron sale.[4]

Efficacy of the System

Table 1 shows the effectiveness of the duplicate-replacement system per one thousand books as tested in the Lee Library:

Table 1

Efficacy of the System

	Number	Percentage %
Duplicates in same condition	577	57.7%
Duplicates in better condition	315	31.5%
Missing stack copies	108	10.8%
Totals	1,000	100.0%
Total replacement copies	423	42.3%

[4]A summary of all statistics is found in the Appendix.

Of the one thousand duplicate books compared at the Lee Library, 577 or 57.7 percent were judged to be in the same condition as stack copies and were not added to the collection. Three hundred and fifteen or 31.5 percent were considered to be in substantially better condition and were used to replace worn stack copies. The remainder, 108 or 10.8 percent, were used to replace missing stack copies. Therefore, 423 or 42.3 percent of the duplicate books replaced worn or missing copies.

Average Cost of the System

Two average costs were compiled and added in order to determine the total cost of the duplicate-replacement system per one thousand books (423 of which were used as replacement copies). First, the average cost of comparing one thousand duplicates was figured. Second, the average cost of processing 423 duplicate books as replacement copies was calculated. Table 2 shows these averages and the total cost of the system:

Table 2

Cost of the System

Average cost of comparing 1,000 duplicates to stacks	$77.00
Average cost of processing 423 replacement copies	$32.00
Total cost of the system per 1,000 duplicates	$110.00

To determine the average cost of comparing one thousand duplicates to stacks, three factors were gathered: 1) the average number of books which could be compared in one hour, 2) the average number of hours it took to compare one thousand duplicates, and 3) the average hourly wages of those employees involved in the comparison. Table 3 shows these data and the average cost of comparing one thousand duplicates:

Table 3

Average Cost of Comparing

Average number of books compared per hour	30
Average number of hours to compare 1,000 books	33.3
Average hourly wages	$2.30
Total average cost of comparing 1,000 duplicates	$77.00

It was found that 25 to 38 duplicate books could be compared to stacks per hour. Thirty books per hour, therefore, was chosen as the average. By dividing 30 books per hour into 1,000 books, it was calculated that it took approximately 33.3 hours to compare one thousand duplicates to stacks:

1,000 books/30 books per hour = 33.3 hours

Since the average hourly wages of those employees involved in the duplicate comparison was $2.30 per hour,

the total average cost of comparing the duplicates was:
($2.30 per hour)(33.3 hours) = $77.00

The average cost of preparing and processing the 423 duplicate books which served as replacement copies for the missing or worn stack items was calculated to be about $32.00. Since no change in shelf list records was required for simple exchanges, the lettering cost was the only processing cost incurred.

It was found that 25 to 35 books could be lettered per hour. Thirty books per hour was chosen as the average. The total hours it took to letter 423 replacement copies was determined by dividing 30 books per hour into 423 books:
423 books/30 books per hour = 14 hours
It took, therefore, about 14 hours to process 423 replacement copies.

Those employees involved in the lettering were paid the average wage of $2.30 per hour. The average cost of processing and preparing 423 replacement copies was figured by multiplying the average number of processing hours with the hourly wage:
(14 hours)($2.30 per hour) = $32.00

The total cost of the replacement system per one thousand books was calculated by adding the comparison cost to the processing cost. The total cost, then, was

about $110.00 per one thousand duplicates:

$77.00 + $32.00 = $110.00

Cost Savings of the System Over Selling the Same Duplicates at a Patron Sale

Two figures were necessary in order to compute this estimated cost savings: 1) the estimated amount of money saved by replacing 423 worn or missing copies with duplicates, and 2) the estimated amount of money earned by selling 423 duplicate books at a patron sale. The following table shows these data and the total estimated cost savings:

Table 4

Estimated Cost Savings

Estimated amount saved by replacing 423 copies with duplicates	$4,966.00
Estimated amount earned by selling 423 duplicates to patrons	$846.00
Estimated cost savings of the system over patron sales	$4,120.00

To determine the amount of money saved by replacing 423 worn or missing books with duplicate copies, an average price of purchasing a replacement copy was estimated. This estimation was based on two figures: 1) the average price of hardcover books in-print, and 2)

the average price of books out-of-print. Table 5 shows these average prices and the estimated average price of a replacement copy:

Table 5

Estimated price of a replacement copy

Average price of a hardcover book in-print	$16.19
Average price of an out-of-print book	$8.00
Estimated average price of a replacement copy	$12.00

According to the Bowker Annual, 1976, the average price of a hardcover book in-print during 1974 and 1975 was $16.19.[5] The average price of a good quality out-of-print book was estimated to be about $8.00. This estimation was admittedly subjective. In many cases, an out-of-print book would be unavailable or require several years to locate and acquire. For sake of comparison, the low figure of $8.00 per out-of-print book was chosen. The two figures, $16.19 and $8.00, were averaged to reflect the estimated purchase cost of a replacement copy--$12.00.

The estimated average price of purchasing 423 replacement copies was figured by multiplying the estimated average price of a replacement copy ($12.00) with 423:

[5] The Bowker Annual of Library & Book Trade Information with Cumulative Index 1972-1976 (21st ed.; New York: Bowker, 1976), 183.

($12.00)(423 books) = $5,076.00

Since the duplicate-replacement system cost about $110.00 to operate, this amount was subtracted from the estimated average price of 423 replacement copies:

$5,076.00
- 110.00

$4,966.00

Therefore, it was estimated that $4,966.00 was saved by using duplicates as replacement copies for 423 worn or missing books.

Book sales to patrons at the Lee Library generally brought $1.00 to $2.00 per volume. Since the 423 duplicate replacement copies were all in good condition, it was estimated that each duplicate would have earned about $2.00 at a patron sale. Therefore, 423 duplicates would have earned an estimated $846.00 at a patron sale:
($2.00)(423 books) = $846.00

The estimated savings of replacing 423 worn or missing books with duplicates over selling those same duplicates to patrons was calculated by subtracting the money potentially earned at a patron sale ($846.00) from the estimated amount saved by using duplicates as replacement copies ($4,966.00):

$4,966.00
- 846.00

$4,120.00

Theoretically, then, $4,120.00 was saved by implementing

the duplicate-replacement system at the Lee Library over selling the same duplicates at a patron sale.

Breakeven Point

The breakeven point or the point at which the system would pay for itself was figured by dividing the estimated average price of a replacement copy ($12.00) into the cost of the system per one thousand books ($110.00):
$110.00/$12.00 per replacement copy = 9 copies

Therefore, if 9 duplicate books out of 1,000 were used to replace worn or missing copies, the system would hypothetically pay for itself.

Chapter 4

CONCLUSIONS

The duplicate-replacement system, as implemented and tested in the Lee Library, proved to be an economical and otherwise beneficial (in terms of improving collection quality) alternative method of handling selected book duplicates. According to the statistics, 42.3 percent or the duplicates compared to stacks were used to replace worn or missing copies. In other words, about four out of every ten books compared needed replacement. Financially, the system cost an estimated $110.00 per one thousand duplicates and it saved the library an estimated $4,120.00 over duplicate sales to patrons.

It was concluded that the duplicate-replacement system can be tested in virtually any library setting. The researcher recommends that instead of comparing and evaluating one thousand good quality duplicate books, a library could probably gather the necessary data by comparing one hunderd to two hundred. The test duplicates should represent all subjects and major divisions in the collection. If only one hundred duplicates were checked with stack copies, the cost would be only about $10.00 to $15.00. This appears to be a reasonable amount

to spend in order to help determine whether further stack checks would be beneficial.

The researcher believes that the duplicate-replacement system could be adapted to any library. Of course, the effectiveness and success of the system depends upon the number of duplicates which a given library receives.

APPENDIX

Statistics

Duplicates in same condition	577 or 57.7%
Duplicates in better condition	315 or 31.5%
Missing stack copies	108 or 10.8%
Total replacement copies per 1,000 books	423 or 42.3%
Average number of books compared per hour	30 books
Average number of hours to compare 1,000 books to stacks	33.3 hours
Average hourly wages	$2.30/hour
Average cost of comparing 1,000 duplicates to stacks	$77.00
Average cost of processing 423 replacement copies	$32.00
Total cost of the system per 1,000 books	$110.00
Estimated amount saved by replacing 423 worn or missing copies with duplicates	$4,966.00
Estimated amount earned by selling 423 duplicates to patrons	$846.00
Estimated cost savings of the system over patron sale	$4,120.00
Average price of a hardcover book in-print	$16.19
Estimated average price of an out-of print book	$8.00
Estimated average price of a replacement copy	$12.00
Breakeven point	9 copies replaced

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